

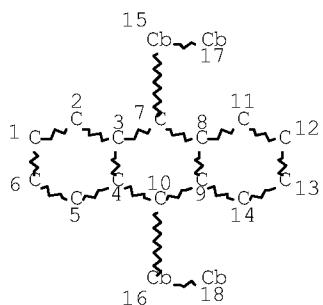
STRUCTURE SEARCH

=&gt; d his 130

(FILE 'HCAPLUS' ENTERED AT 14:21:26 ON 13 JAN 2010)  
 L30 20 S L26 AND (L28 OR L29)  
 SAV TEMP L30 GAR586HCP/A

FILE 'STNGUIDE' ENTERED AT 14:24:03 ON 13 JAN 2010

FILE 'HCAPLUS' ENTERED AT 14:24:36 ON 13 JAN 2010

=> d que stat 130  
L5 STR

## NODE ATTRIBUTES:

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 ECOUNT IS M6 C AT 17  
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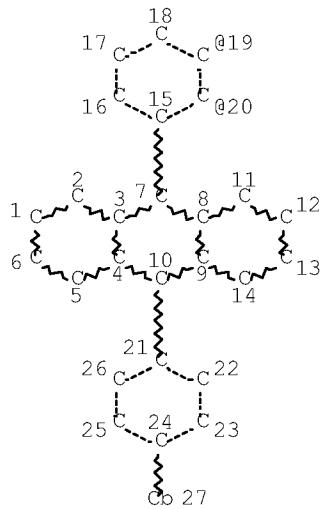
RSPEC I  
 NUMBER OF NODES IS 18

## STEREO ATTRIBUTES: NONE

L7 2252 SEA FILE=REGISTRY SSS FUL L5  
 L10 STR

Cb @28

Page 1-A



Page 2-A

VPA 28-19/20 U

NODE ATTRIBUTES:

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 DEFAULT ECLEVEL IS LIMITED  
 ECOUNT IS M6 C AT 27  
 ECOUNT IS M6 C AT 28

GRAPH ATTRIBUTES:

RSPEC I

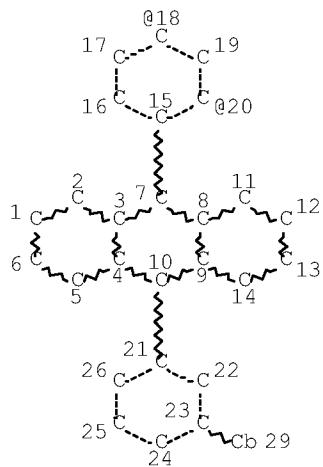
NUMBER OF NODES IS 28

STEREO ATTRIBUTES: NONE

L12 149 SEA FILE=REGISTRY SUB=L7 SSS FUL L10  
 L15 STR

Cb @28

Page 1-A

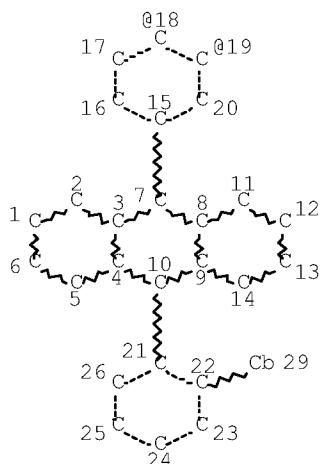


Page 2-A  
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 NODE ATTRIBUTES:  
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 DEFAULT ECLEVEL IS LIMITED  
 ECOUNT IS M6 C AT 28  
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GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 28

STEREO ATTRIBUTES: NONE  
 L17 131 SEA FILE=REGISTRY SUB=L7 SSS FUL L15  
 L20 STR  
 Cb @28

Page 1-A



Page 2-A  
 VPA 28-18/19 U  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
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 DEFAULT ECLEVEL IS LIMITED  
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GRAPH ATTRIBUTES:  
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 NUMBER OF NODES IS 28

STEREO ATTRIBUTES: NONE  
 L22 61 SEA FILE=REGISTRY SUB=L7 SSS FUL L20  
 L24 169 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L12 OR L17  
 OR L22  
 L26 65 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L24  
 L28 QUE SPE=ON ABB=ON PLU=ON PY=<2004 NOT P/DT  
 L29 QUE SPE=ON ABB=ON PLU=ON (PY=<2004 OR PRY=<2004 OR  
 AY=<2004 OR MY=<2004 OR REVIEW/DT) AND P/DT  
 L30 20 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L26 AND (L28  
 OR L29)

STRUCTURE SEARCH RESULTS

=> d 130 1-20 ibib ed abs hitstr hitind

L30 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2006:656144 HCAPLUS Full-text  
 DOCUMENT NUMBER: 145:115194  
 TITLE: Luminescent ink composition for organic  
 electroluminescent device  
 INVENTOR(S): Inoue, Tetsuya; Kondo, Hirofumi; Ikeda,  
 Hidetsugu  
 PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 66 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2006070712	A1	20060706	WO 2005-JP23712	2005 1226
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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
US 20080001123	A1	20080103	US 2007-813062	2007 0628
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PRIORITY APPLN. INFO.:		JP 2004-380642	A	2004 1228
<--				
		WO 2005-JP23712	W	2005 1226

## ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 145:115194

ED Entered STN: 07 Jul 2006

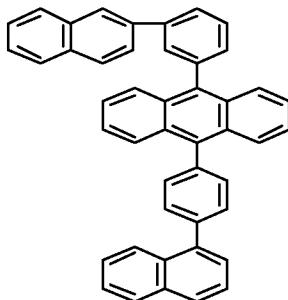
AB Disclosed is a luminescent ink composition for organic EL devices which contains a low-mol. weight material of high solubility and can be easily formed into a thin film by a wet process. This ink composition enables to form an organic thin film using a luminescent low-mol. weight material with high productivity by a wet process. Specifically disclosed is a luminescent ink composition for organic electroluminescent devices which is composed of the following components (A), (B) and (C): (A) an anthracene derivative, (B) a fused aromatic ring compound having a substituted arylamino group and/or a styryl derivative having a substituted arylamino group (C) an organic solvent.

IT 853945-29-6 853945-36-S

RL: DEV (Device component use); USES (Uses)  
 (luminescent ink compns. for organic electroluminescent devices)

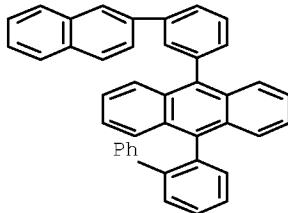
RN 853945-29-6 HCPLUS

CN Anthracene, 9-[3-(2-naphthalenyl)phenyl]-10-[4-(1-naphthalenyl)phenyl]- (CA INDEX NAME)



RN 853945-36-5 HCPLUS

CN Anthracene, 9-[1,1'-biphenyl]-2-yl-10-[3-(2-naphthalenyl)phenyl]- (CA INDEX NAME)



CC 76-3 (Electric Phenomena)

Section cross-reference(s): 74

IT 2085-33-8, Tris(8-quinolinolato)aluminum 55035-42-2  
312497-12-4 663954-33-4 667940-34-3 667940-36-5  
693289-37-1 853945-27-4 853945-29-6  
853945-36-5 855828-33-0 896457-49-1

RL: DEV (Device component use); USES (Uses)

(luminescent ink compns. for organic electroluminescent devices)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE  
THIS RECORD (2 CITINGS)REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L30 ANSWER 2 OF 20 HCPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2006:383875 HCPLUS Full-text

DOCUMENT NUMBER: 144:422242

TITLE: Selection method of materials used in  
electroluminescent layer of organic LED and  
production method of organic LED

INVENTOR(S): Fujita, Tetsushi; Inoue, Tetsuji

PATENT ASSIGNEE(S): Tdk Corporation, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 43 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
JP 2006114844	A	20060427	JP 2004-303319	2004 1018

PRIORITY APPLN. INFO.:	DATE
JP 2004-303319	2004 1018

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ED Entered STN: 27 Apr 2006

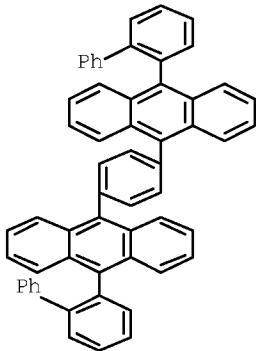
AB The invention relates to a selection method of materials used for an organic LED that comprises an electroluminescent layer of a host-guest structure, wherein the selection of the guest for a specific host is based on the correlations between the electroluminescent quantum efficiency and the mol. weight ratio of the guest mol. to the specific host mol., that is obtained among guest mols. having an identical main skeleton.

IT 828268-34-4

RL: DEV (Device component use); USES (Uses)  
(host; selection method of materials used in electroluminescent layer of organic LED)

RN 828268-34-4 HCPLUS

CN Anthracene, 9,9'-(1,4-phenylene)bis[10-[1,1'-biphenyl]-2-yl- (CA INDEX NAME)



CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 23102-67-2 312497-16-8 828268-34-4 850064-02-7

RL: DEV (Device component use); USES (Uses)  
(host; selection method of materials used in electroluminescent layer of organic LED)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L30 ANSWER 3 OF 20 HCPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2005:1292785 HCPLUS Full-text

DOCUMENT NUMBER: 144:29552

TITLE: Electroluminescent devices employing mixtures of electroluminescent and nonelectroluminescent components

INVENTOR(S): Brown, Christopher T.; Hatwar, Tukaram K.; Ricks, Michele L.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 61 pp., Cont.-in-part

## 10/572,586-319461-EIC SEARCH

of U.S. Ser. No. 658,010, abandoned.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050271899	A1	20051208	US 2005-159691	2005 0623
US 20040126617	A1	20040701	US 2003-658010	2003 0909
<--				
US 2002-334324				B2 2002 1231
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US 2003-658010				B2 2003 0909
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## ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 144:29552

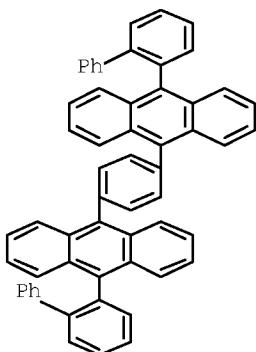
ED Entered STN: 09 Dec 2005

AB Organic light-emitting devices comprising a light-emitting layer containing an electroluminescent component having a first bandgap and  $\geq 2$  nonelectroluminescent components having second and further bandgaps, resp. are described in which the second bandgap is equal to or greater than the first bandgap but is  $\leq 2.7$  eV; the further bandgaps are greater than the first and second bandgaps; the nonelectroluminescent component with the second bandgap is present in an amount of  $\geq 34$  weight % of the total components in the light-emitting layer; the nonelectroluminescent components with further bandgaps are present in a combined amount of 0.1-65.9 weight % of the total components in the light-emitting layer; and the electroluminescent component is present in amount of 0.1-5 weight % of the total components in the light-emitting layer.

IT 828268-34-4

RL: DEV (Device component use); USES (Uses)  
(organic electroluminescent devices employing mixts. of  
electroluminescent and nonelectroluminescent components)

RN 828268-34-4 HCPLUS

CN Anthracene, 9,9'-(1,4-phenylene)bis[10-[1,1'-biphenyl]-2-yl- (CA  
INDEX NAME)

## 10/572,586-319461-EIC SEARCH

IC ICM H05B033-14  
 INCL 428690000; 428917000; 313504000; 313506000; 257088000; 257089000;  
 427066000  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related  
 Properties)  
 Section cross-reference(s): 76  
 IT 281-23-2D, Adamantane, aryl derivs. 517-51-1 2085-33-8,  
 Tris(8-hydroxyquinolinato)aluminum 51325-95-2 85213-03-2  
 123847-85-8 159788-00-8 175606-05-0 192198-85-9  
 200052-70-6 200052-71-7 200052-72-8 213749-94-1  
 219318-86-2 219319-06-9 274905-73-6 368884-57-5  
 374592-94-6 478799-46-1 478799-67-6 504408-22-4  
 616235-15-5 714215-47-1 828268-34-4 865435-17-2  
 865435-18-3 865435-19-4 865435-20-7 865435-21-8  
 865435-22-9 865435-23-0 865435-24-1 865435-25-2  
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 865435-30-9 865435-31-0 865435-32-1 865435-33-2  
 865435-34-3 865435-35-4 865435-36-5 865435-38-7  
 865435-39-8 868839-39-8 870558-11-5 870558-13-7  
 870558-18-2 870558-21-7  
 RL: DEV (Device component use); USES (Uses)  
 (organic electroluminescent devices employing mixts. of  
 electroluminescent and nonelectroluminescent components)

L30 ANSWER 4 OF 20 HCPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2005:1198275 HCPLUS Full-text  
 DOCUMENT NUMBER: 143:449139  
 TITLE: Organic electroluminescent device  
 INVENTOR(S): Ara, Kensuke; Inoue, Tetsushi  
 PATENT ASSIGNEE(S): Tdk Corporation, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2005317450	A	20051110	JP 2004-136276	2004 0430
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PRIORITY APPLN. INFO.:			JP 2004-136276	2004 0430
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OTHER SOURCE(S): MARPAT 143:449139

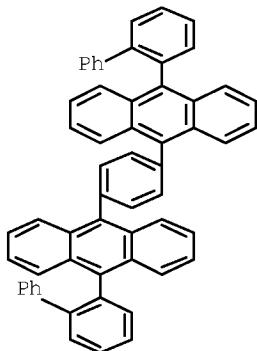
ED Entered STN: 11 Nov 2005

AB The invention relates to an organic electroluminescent device comprising an organic electroluminescent layer(s), including an electroluminescent layer, and inorg. layers sandwiched between a pair of electrodes, wherein the compound represented by  $L-(A)_n$  [ $L = 2-4$  valent linking group;  $A = \pi$ -conjugated cyclic group; and  $n = 2-4$  integer].

IT 828268-34-4  
 RL: DEV (Device component use); USES (Uses)  
 (organic electroluminescent device)

RN 828268-34-4 HCPLUS

CN Anthracene, 9,9'-(1,4-phenylene)bis[10-[1,1'-biphenyl]-2-yl- (CA  
 INDEX NAME)

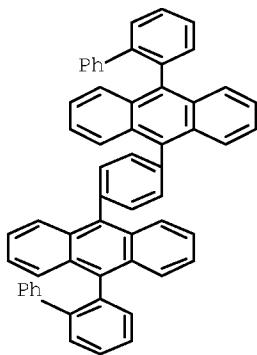


IC ICM H05B033-14  
 ICS C09K011-06; H05B033-22  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 Section cross-reference(s): 74  
 IT 265989-62-6, Germanium indium oxide 828268-34-4  
 RL: DEV (Device component use); USES (Uses)  
 (organic electroluminescent device)

L30 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2005:1129854 HCAPLUS Full-text  
 DOCUMENT NUMBER: 143:396107  
 TITLE: Organic electroluminescent device and its production method  
 INVENTOR(S): Ara, Kensuke; Inoue, Tetsuji; Tanaka, Michi  
 PATENT ASSIGNEE(S): Tdk Corporation, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2005293961	A	20051020	JP 2004-105639	2004 0331
<--				
JP 2004-105639				
2004 0331				
<--				

ED Entered STN: 21 Oct 2005  
 AB The invention relates to an organic electroluminescent device that comprises an inorg. hole injection layer disposed between a hole injection electrode and a light-emitting layer for enhancing the electroluminescent efficiency and an operation life time, wherein the inorg. hole injection layer is prepared in the atmospheric containing N<sub>2</sub> 1-70 and O<sub>2</sub> ≥ 10 volume % using a metal oxide and/or oxynitride target for improving the high temperature durability of the device.  
 IT 828268-34-4  
 RL: DEV (Device component use); USES (Uses)  
 (organic electroluminescent device having inorg. hole injection layer)  
 RN 828268-34-4 HCAPLUS  
 CN Anthracene, 9,9'-(1,4-phenylene)bis[10-[1,1'-biphenyl]-2-yl- (CA INDEX NAME)

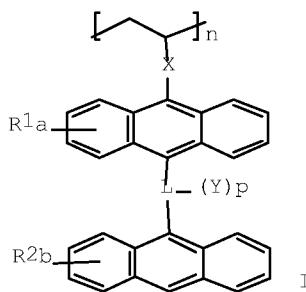


IC ICM H05B033-10  
IC S H05B033-14; H05B033-22  
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
IT 7789-24-4, Lithium fluoride, uses 50926-11-9, ITO 216066-60-3  
312497-12-4 639506-62-0 828268-34-4  
RL: DEV (Device component use); USES (Uses)  
(organic electroluminescent device having inorg. hole injection  
layer)  
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE  
THIS RECORD (1 CITINGS)

L30 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2005:1099274 HCAPLUS Full-text  
DOCUMENT NUMBER: 143:396424  
TITLE: Organic electroluminescent display devices  
INVENTOR(S): Ebisawa, Akira; Kanbe, Emiko  
PATENT ASSIGNEE(S): TDK Corporation, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2005285466	A	20051013	JP 2004-96010	2004 0329
JP 4317476	B2	20090819	JP 2004-96010	2004 0329
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PRIORITY APPLN. INFO.:				

ED      Entered STN: 13 Oct 2005  
GT



AB The title device has an organic electroluminescent layer between a pair of electrodes, wherein the organic electroluminescent layer contains compound I (X = 2-valent organic ; p = 0, integer  $\geq 1$ ; L = C1-4 2-valent aliphatic hydrocarbon, C6-13 (p+2)-valent aroms., imino; Y, R1-2 = mono-valent substituent; a = integer 0-8; b = integer 0-9; n= integer  $\geq 1$ ). The device shows long service-life.

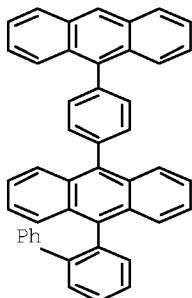
IT 866610-00-6P 866610-02-8P

866610-04-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(organic electroluminescent display devices)

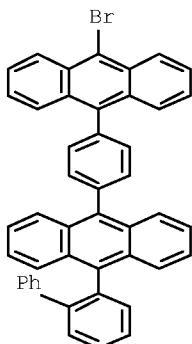
RN 866610-00-6 HCPLUS

CN Anthracene, 9-[4-(9-anthracenyl)phenyl]-10-[1,1'-biphenyl]-2-yl-  
(CA INDEX NAME)

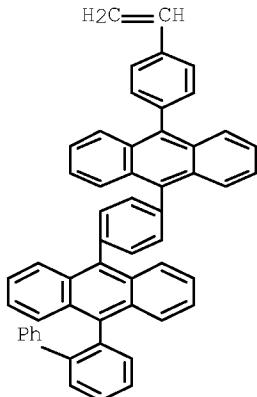


RN 866610-02-8 HCPLUS

CN Anthracene, 9-[4-(10-[1,1'-biphenyl]-2-yl-9-anthracenyl)phenyl]-10-  
bromo- (CA INDEX NAME)



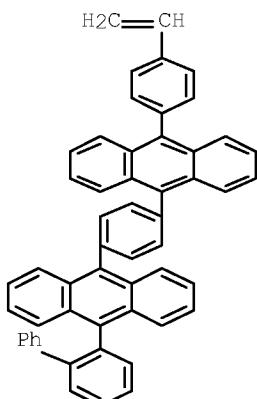
RN 866610-04-0 HCPLUS  
 CN Anthracene, 9-[4-(10-[1,1'-biphenyl]-2-yl-9-anthracyl)phenyl]-10-(4-ethenylphenyl)- (CA INDEX NAME)



IT 866610-06-2P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (organic electroluminescent display devices)  
 RN 866610-06-2 HCPLUS  
 CN Anthracene, 9-[4-(10-[1,1'-biphenyl]-2-yl-9-anthracyl)phenyl]-10-(4-ethenylphenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 866610-04-0  
 CMF C54 H36



IC ICM H05B033-14  
 ICS C08F012-08; C09K011-06  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 35

# 10/572,586-319461-EIC SEARCH

IT 23674-20-6P 24672-71-7P 334658-75-2P 400607-16-1P  
 400607-48-9P 850064-02-7P 866609-81-6P 866609-82-7P  
 866609-86-1P 866609-90-7P 866609-92-9P 866609-97-4P  
 866610-00-6P 866610-02-8P  
 866610-04-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (organic electroluminescent display devices)  
 IT 866609-94-1P 866610-06-2P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (organic electroluminescent display devices)  
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L30 ANSWER 7 OF 20 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2005:962579 HCAPLUS Full-text  
 DOCUMENT NUMBER: 143:256816  
 TITLE: White organic electroluminescence device  
 INVENTOR(S): Tokairin, Hiroshi; Fukuoka, Kenichi; Kubota, Mineyuki; Funahashi, Masakazu  
 PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 63 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2005081587	A1	20050901	WO 2005-JP2442	2005 0217

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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,  
 CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,  
 ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,  
 KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
 MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL,  
 PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,  
 TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
 ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH,  
 CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT,  
 LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1718124	A1	20061102	EP 2005-719244	2005 0217
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
 MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL,  
 SK, IS

CN 1879454	A	20061213	CN 2005-80001270	2005 0217
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US 20070063638	A1	20070322	US 2006-573661	2006 0328
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KR 2006115372	A	20061108	KR 2006-708168	2006 0427
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PRIORITY APPLN. INFO.:

JP 2004-42694

A

2004  
0219<--  
WO 2005-JP2442

W

2005  
0217

## ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 02 Sep 2005

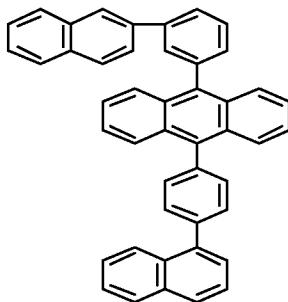
AB The invention refers to a white organic electroluminescence device comprising a neg. electrode and a pos. electrode and, interposed there between, one or more organic thin film layers including at least a light emitting layer, wherein the light emitting layer is constituted of a laminate of blue color light emitting layer and yellow-to-red color light emitting layer and contains an asym. condensed-ring-containing compound. This white color organic electroluminescence device realizes reduced chromaticity changes and excels in luminous efficiency and thermal stability, ensuring strikingly prolonged service life.

IT 853945-29-6 853945-34-3

RL: DEV (Device component use); USES (Uses)  
(white color organic electroluminescence device)

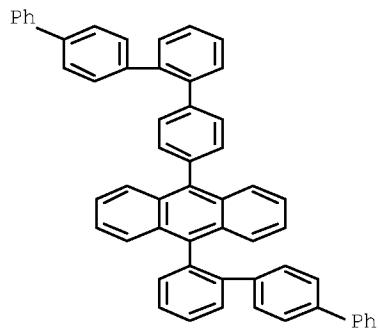
RN 853945-29-6 HCAPLUS

CN Anthracene, 9-[3-(2-naphthalenyl)phenyl]-10-[4-(1-naphthalenyl)phenyl]- (CA INDEX NAME)



RN 853945-34-3 HCAPLUS

CN Anthracene, 9-[1,1':2',1'':4'',1'''-quaterphenyl]-4-yl-10-[1,1':4',1''-terphenyl]-2-yl- (9CI) (CA INDEX NAME)

IC ICM H05B033-14  
ICS C09K011-06

# 10/572,586-319461-EIC SEARCH

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 IT 154853-83-5 331965-31-2 667940-34-3 667940-36-5  
 764657-26-3 853945-27-4 853945-29-6  
 853945-34-3 855828-33-0 863292-27-7 863292-28-8  
 863292-29-9  
 RL: DEV (Device component use); USES (Uses)  
 (white color organic electroluminescence device)  
 OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE  
 THIS RECORD (7 CITINGS)  
 REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L30 ANSWER 8 OF 20 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2005:523395 HCAPLUS Full-text  
 DOCUMENT NUMBER: 143:68072  
 TITLE: Asymmetric monoanthracene derivative, material  
 for organic electroluminescent device and  
 organic electroluminescent device utilizing  
 the same  
 INVENTOR(S): Kubota, Mineyuki; Funahashi, Masakazu  
 PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 100 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005054162	A1	20050616	WO 2004-JP18111	2004 1130 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1707550	A1	20061004	EP 2004-799959	2004 1130 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
CN 1871192	A	20061129	CN 2004-80031556	2004 1130 <--
CN 100471827	C	20090325		
US 20070055085	A1	20070308	US 2006-572586	2006 0320 <--
KR 2006108642	A	20061018	KR 2006-708388	2006 0428 <--

10/572,586-319461-EIC SEARCH

IN 2006CN01453	A	20070706	IN 2006-CN1453	
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<--				
IN 2009CN01179	A	20090529	IN 2009-CN1179	
				2009 0302
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PRIORITY APPLN. INFO.:		JP 2003-401038	A	
				2003 1201
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	WO 2004-JP18111		W	
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	IN 2006-CN1453		A3	
				2006 0428

OTHER SOURCE(S): MARPAT 143:68072

ED Entered STN: 17 Jun 2005

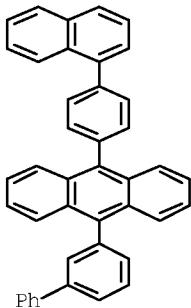
AB An asym. monoanthracene derivative of specified structure; and a material for organic EL device comprising the asym. monoanthracene derivative. There is further provided an organic EL device comprising neg. and pos. electrodes and, interposed there between, an organic thin film layer consisting of one or two or more layers including at least a light emitting layer, wherein at least one layer of the organic thin film layer contains the asym. monoanthracene derivative alone or as a component of mixture. There are provided an organic electroluminescent (EL) device of high luminous efficiency and prolonged durability and, for realization thereof, an asym. monoanthracene derivative and material for organic EL device.

IT 853945-46-7 853945-47-8

RL: DEV (Device component use); USES (Uses)  
(asym. monoanthracene derivative, material for organic  
electroluminescent device and organic electroluminescent device  
utilizing same)

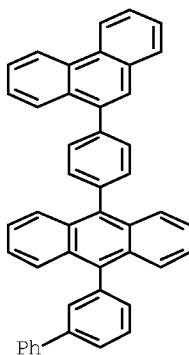
RN 853945-46-7 HCPLUS

CN Anthracene, 9-[1,1'-biphenyl]-3-yl-10-[4-(1-naphthalenyl)phenyl]-  
(CA INDEX NAME)



RN 853945-47-8 HCPLUS

CN Anthracene, 9-[1,1'-biphenyl]-3-yl-10-[4-(9-phenanthrenyl)phenyl]-  
(CA INDEX NAME)

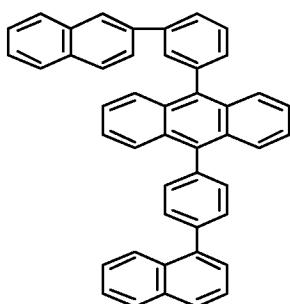


IT 853945-29-6P 853945-36-5P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (asym. monoanthracene derivative, material for organic electroluminescent device and organic electroluminescent device utilizing same)

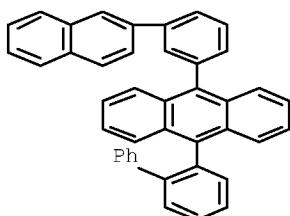
RN 853945-29-6 HCPLUS

CN Anthracene, 9-[3-(2-naphthalenyl)phenyl]-10-[4-(1-naphthalenyl)phenyl]- (CA INDEX NAME)



RN 853945-36-5 HCPLUS

CN Anthracene, 9-[1,1'-biphenyl]-2-yl-10-[3-(2-naphthalenyl)phenyl]- (CA INDEX NAME)



IT 853945-30-9P 853945-31-0P

853945-32-1P 853945-33-2P

853945-34-3P 853945-35-4P

853945-37-6P 853945-42-3P

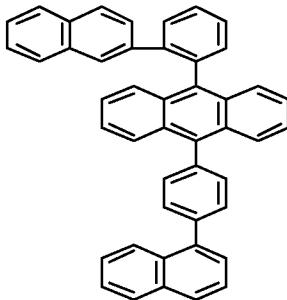
853945-45-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(asym. monoanthracene derivative, material for organic electroluminescent device and organic electroluminescent device utilizing same)

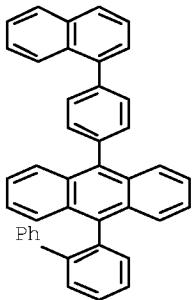
RN 853945-30-9 HCPLUS

CN Anthracene, 9-[2-(2-naphthalenyl)phenyl]-10-[4-(1-naphthalenyl)phenyl]- (CA INDEX NAME)



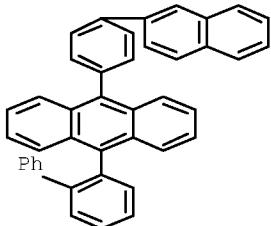
RN 853945-31-0 HCPLUS

CN Anthracene, 9-[1,1'-biphenyl]-2-yl-10-[4-(1-naphthalenyl)phenyl]- (CA INDEX NAME)



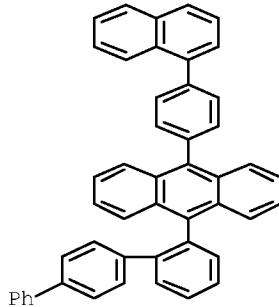
RN 853945-32-1 HCPLUS

CN Anthracene, 9-[1,1'-biphenyl]-2-yl-10-[4-(2-naphthalenyl)phenyl]- (CA INDEX NAME)



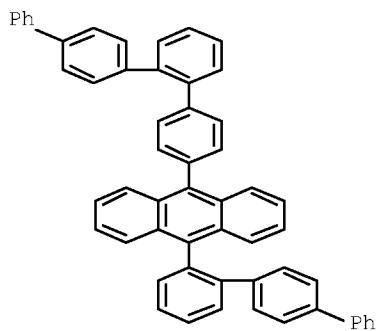
RN 853945-33-2 HCAPLUS

CN Anthracene, 9-[4-(1-naphthalenyl)phenyl]-10-[1,1':4',1''-terphenyl]-2-yl- (9CI) (CA INDEX NAME)



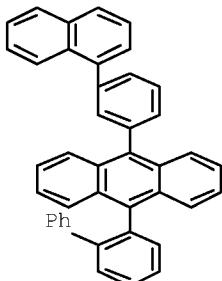
RN 853945-34-3 HCAPLUS

CN Anthracene, 9-[1,1':2',1'':4'',1''''-quaterphenyl]-4-yl-10-[1,1':4',1''-terphenyl]-2-yl- (9CI) (CA INDEX NAME)



RN 853945-35-4 HCAPLUS

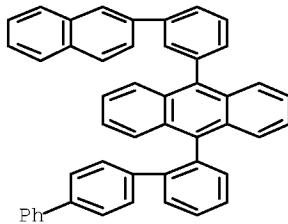
CN Anthracene, 9-[1,1'-biphenyl]-2-yl-10-[3-(1-naphthalenyl)phenyl]- (CA INDEX NAME)



RN 853945-37-6 HCAPLUS

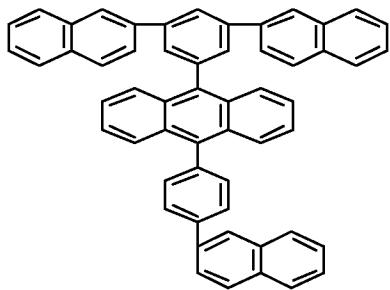
CN Anthracene, 9-[3-(2-naphthalenyl)phenyl]-10-[1,1':4',1''-

terphenyl]-2-yl- (9CI) (CA INDEX NAME)



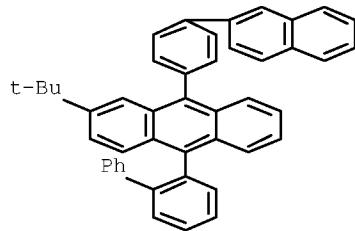
RN 853945-42-3 HCPLUS

CN Anthracene, 9-(3,5-di-2-naphthalenylphenyl)-10-[4-(2-naphthalenyl)phenyl]- (CA INDEX NAME)



RN 853945-45-6 HCPLUS

CN Anthracene, 10-[1,1'-biphenyl]-2-yl-2-(1,1-dimethylethyl)-9-[4-(2-naphthalenyl)phenyl]- (CA INDEX NAME)



IC ICM C07C015-27

ICS C09K011-06; H05B033-14

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 25

IT 2085-33-8, Alq3 154853-83-5 164724-35-0 209980-53-0  
669016-16-4 853945-46-7 853945-47-8

RL: DEV (Device component use); USES (Uses)

(asym. monoanthracene derivative, material for organic  
electroluminescent device and organic electroluminescent device  
utilizing same)IT 853945-27-4P 853945-29-6P 853945-36-5P  
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic

# 10/572,586-319461-EIC SEARCH

preparation); PREP (Preparation); USES (Uses)  
 (asym. monoanthracene derivative, material for organic  
 electroluminescent device and organic electroluminescent device  
 utilizing same)

IT 853945-28-5P 853945-30-9P 853945-31-0P  
 853945-32-1P 853945-33-2P  
 853945-34-3P 853945-35-4P  
 853945-37-6P 853945-38-7P 853945-39-8P 853945-40-1P  
 853945-41-2P 853945-42-3P 853945-43-4P  
 853945-44-5P 853945-45-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP  
 (Preparation)

(asym. monoanthracene derivative, material for organic  
 electroluminescent device and organic electroluminescent device  
 utilizing same)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE  
 THIS RECORD (10 CITINGS)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L30 ANSWER 9 OF 20 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2005:369061 HCAPLUS Full-text

DOCUMENT NUMBER: 142:419750

TITLE: OLED device with asymmetric monoanthracene  
 derivative host

INVENTOR(S): Cosimescu, Lelia; Vreeland, William B.;  
 Conley, Scott R.; Mount, Jeri L.

PATENT ASSIGNEE(S): Eastman Kodak Company, USA

SOURCE: U.S. Pat. Appl. Publ., 19 pp.  
 CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050089715	A1	20050428	US 2003-692562	2003 1024
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US 7056601	B2	20060606		
WO 2005042667	A1	20050512	WO 2004-US33559	2004 1012
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W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1680480	A1	20060719	EP 2004-794812	2004 1012
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R:	DE, FR, GB			
CN 1871324	A	20061129	CN 2004-80031299	2004

## 10/572,586-319461-EIC SEARCH

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JP 2007510294	T	20070419	JP 2006-536666	
				2004
				1012
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KR 2006096055	A	20060905	KR 2006-707640	
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PRIORITY APPLN. INFO.:			US 2003-692562	A
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			WO 2004-US33559	W
				2004
				1012
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OTHER SOURCE(S): MARPAT 142:419750

ED Entered STN: 29 Apr 2005

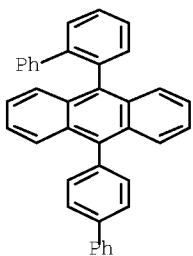
AB Organic electroluminescent devices (OLED) are described which comprise an anode and a cathode between which is located a light-emitting layer containing a light-emitting dopant and a host comprising a monoanthracene derivative with different substituents at 9th (R9) and 10th (R10) position; R9 is a biphenyl group containing no fused rings with aliphatic carbon ring members; R10 is an ortho-substituted- or meta-monosubstituted Ph group where the substituent is selected from fluorine, hydroxy, cyano, alkyl, alkoxy, aryloxy, aryl, carboxy, trimethylsilyl, and heterocyclic oxy groups; provided that R9 and R10 are free of amines and sulfur compds.

IT 850539-22-9P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(host; OLED device employing light-emitting dopant in asym.  
monoanthracene derivative host)

RN 850539-22-9 HCPLUS

CN Anthracene, 9-[1,1'-biphenyl]-2-yl-10-[1,1'-biphenyl]-4-yl- (9CI)  
(CA INDEX NAME)



IC ICM H05B033-14

INCL 428690000; X42-891.7; X31-350.4; X31-350.6

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 25, 74, 76

IT 850539-22-9P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(host; OLED device employing light-emitting dopant in asym.  
monoanthracene derivative host)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE  
THIS RECORD (13 CITINGS)

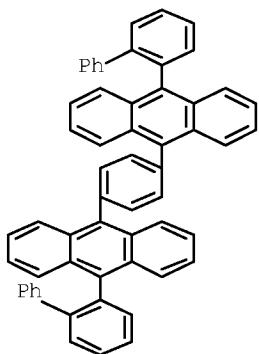
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L30 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2005:346259 HCAPLUS Full-text  
 DOCUMENT NUMBER: 142:400310  
 TITLE: Organic electroluminescent device and its  
 production method  
 INVENTOR(S): Ara, Kensuke; Inoue, Tetsuji  
 PATENT ASSIGNEE(S): TDK Corporation, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005108692	A	20050421	JP 2003-341974	2003 0930

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 PRIORITY APPLN. INFO.: JP 2003-341974  
 2003  
0930  
 <--

ED Entered STN: 22 Apr 2005  
 AB The invention relates to an organic electroluminescent device comprising a substrate, a hole injection electrode, an electron injection electrode, a electroluminescent layer, and an inorg. hole injection layer, wherein the hole injection layer mainly contains the oxide represented by  $Si_1-aGe_aO_b$  [ $a = 0-1$ , and  $b = 1.7-2.4$ ] and contains  $\geq 1$  oxide(s) selected from In, Zn, Ru and V oxides as a minor component. The hole injection layer is formed in an oxidation gas atmospheric at a specific substrate temperature  
 IT 828268-34-4  
 RL: DEV (Device component use); USES (Uses)  
 (host; organic electroluminescent device with inorg. oxide hole  
 injection layer)  
 RN 828268-34-4 HCAPLUS  
 CN Anthracene, 9,9'-(1,4-phenylene)bis[10-[1,1'-biphenyl]-2-yl- (CA  
 INDEX NAME)



IC ICM H05B033-22  
 ICS H05B033-10; H05B033-14  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related  
 Properties)  
 IT 172285-83-5 312497-12-4 639506-60-8 828268-34-4  
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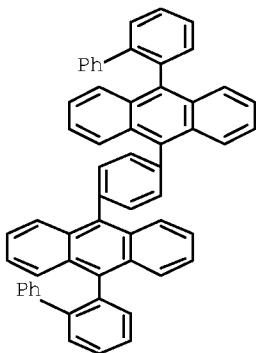
10/572,586-319461-EIC SEARCH

RL: DEV (Device component use); USES (Uses)  
 (host; organic electroluminescent device with inorg. oxide hole  
 injection layer)  
 OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE  
 THIS RECORD (3 CITINGS)

L30 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2005:57709 HCAPLUS Full-text  
 DOCUMENT NUMBER: 142:165279  
 TITLE: Method for selection of organic  
 electroluminescent materials for manufacture  
 of organic electroluminescent devices with  
 long service life  
 INVENTOR(S): Ogawa, Hiromitsu; Inoue, Tetsuji  
 PATENT ASSIGNEE(S): TDK Corporation, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2005019327	A	20050120	JP 2003-185646	
				2003
				0627
<--				
JP 2003-185646				
2003				
0627				
<--				

ED Entered STN: 21 Jan 2005  
 AB The process consists of determination of host materials and dopant materials for  
 emitter layers of organic electroluminescent (EL) devices based on lifetime of  
 fluorescence of  $\geq 2$  samples containing the host materials and/or dopant materials.  
 IT 828268-34-4  
 RL: ANT (Analyte); DEV (Device component use); ANST (Analytical  
 study); USES (Uses)  
 (host; method for selection of organic electroluminescent  
 materials for manufacture of organic electroluminescent devices with  
 long service life)  
 RN 828268-34-4 HCAPLUS  
 CN Anthracene, 9,9'-(1,4-phenylene)bis[10-[1,1'-biphenyl]-2-yl- (CA  
 INDEX NAME)



IC ICM H05B033-10  
 ICS H05B033-14  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 IT 186412-15-7 474266-91-6 828268-34-4  
 RL: ANT (Analyte); DEV (Device component use); ANST (Analytical study); USES (Uses)  
 (host; method for selection of organic electroluminescent materials for manufacture of organic electroluminescent devices with long service life)

L30 ANSWER 12 OF 20 HCPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2005:36159 HCPLUS [Full-text](#)

DOCUMENT NUMBER: 143:153133

TITLE: Synthesis and electroluminescent properties of fluorene- and anthracene-derivatives containing novel tetraphenylbenzene moiety

AUTHOR(S): Kay, Kwang-Yol; Kim, Jung Hoon; Cho, Hyun Nam; Park, Jong-Wook

CORPORATE SOURCE: Department of Molecular Science and Technology, Ajou University, Suwon, S. Korea

SOURCE: Molecular Crystals and Liquid Crystals (2004), 424, 167-172

CODEN: MCLCD8; ISSN: 1542-1406

PUBLISHER: Taylor & Francis, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 143:153133

ED Entered STN: 14 Jan 2005

AB 2,7-Bis[(2,3,4,5-tetraphenyl)phenyl]-9,9-diethylfluorene (BTPDF) and 2,7-bis[(2,3,4,5-tetraphenyl)phenyl]-9,10-anthracene (BTPA), which consist of a diethylfluorene and an anthracene with two tetraphenylbenzene moieties, were synthesized by Diels-Alder reaction and characterized to investigate electroluminescent (EL) behavior. BTPDF and BTPA showed violet and blue photoluminescence spectra at 400 nm and 456 nm. The device of m-MTDATA (600 Å)/NPB (150 Å)/BTPDF or BTPA (300 Å)/Alq3 (300 Å)/LiF (10 Å)/Al (2000 Å) showed turn-on voltage of 9 V and 13 V and blue and green EL spectrum at 466 nm and 504 nm, resp.

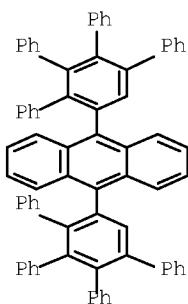
IT 103511-51-9F

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and photoluminescence of bis(tetraphenylphenyl)anthracene and -diethylfluorene via Diels-Alder addition of diethynylanthracene or -diethylfluorene with tetraphenylcyclopentadieneone and their properties in electrophotoluminescent device)

RN 103511-51-9 HCPLUS

CN Anthracene, 9,10-bis(5,6-diphenyl[1,1':2',1'''-terphenyl]-3'-yl)-(9CI) (CA INDEX NAME)



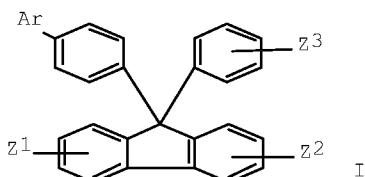
10/572,586-319461-EIC SEARCH

CC 25-27 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
 Section cross-reference(s): 73, 76  
 IT 103511-51-9P 860014-88-6P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and photoluminescence of bis(tetraphenylphenyl)anthracene and -diethylfluorene via Diels-Alder addition of diethynylanthracene or -diethylfluorene with tetraphenylcyclopentadieneone and their properties in electrophotoluminescent device)  
 OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)  
 REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2003:723685 HCAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 139:252299  
 TITLE: Diphenylfluorene derivatives and organic electroluminescence devices using them with high luminescence efficiency  
 INVENTOR(S): Ishida, Tsutomu; Shimamura, Takehiko; Tanabe, Yoshimitsu; Totani, Yoshiyuki; Nakatsuka, Masakatsu  
 PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 40 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003261472	A	20030916	JP 2002-62101	2002 0307 ---
PRIORITY APPLN. INFO.:			JP 2002-62101	2002 0307 ---

OTHER SOURCE(S): MARPAT 139:252299  
 ED Entered STN: 16 Sep 2003  
 GI



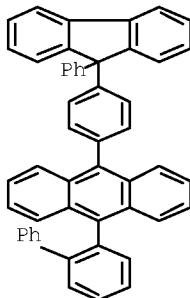
AB The electroluminescence devices contain the diphenylfluorene derivs. I (Ar = anthryl; z1-3 = H, halo, alkyl, alkoxy, aryl, aralkyl) between a pair of electrodes. The electroluminescence devices may further contain luminescent organic metal complexes and triarylaminies.  
 IT 597554-07-9P 597554-18-2P

10/572,586-319461-EIC SEARCH

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (anthrylphenylphenylfluorene derivs. for organic EL devices with high luminescence efficiency)

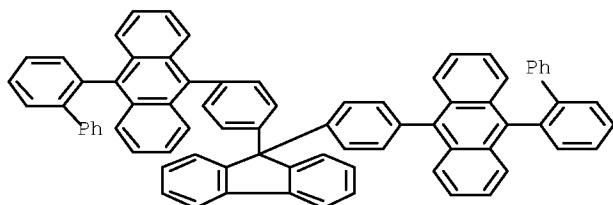
RN 597554-07-9 HCPLUS

CN Anthracene, 9-[1,1'-biphenyl]-2-yl-10-[4-(9-phenyl-9H-fluoren-9-yl)phenyl]- (CA INDEX NAME)



RN 597554-18-2 HCPLUS

CN Anthracene, 9,9'-(9H-fluoren-9-ylidenedi-4,1-phenylene)bis[10-[1,1'-biphenyl]-2-yl- (9CI) (CA INDEX NAME)



IC ICM C07C013-573

ICS C07C211-54; C07C211-61; C09K011-06; H05B033-14; H05B033-22

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 460347-61-9P 597554-04-6P 597554-05-7P 597554-06-8P  
 597554-07-9P 597554-08-0P 597554-09-1P 597554-10-4P  
 597554-11-5P 597554-12-6P 597554-13-7P 597554-14-8P  
 597554-15-9P 597554-16-0P 597554-17-1P 597554-18-2P  
 597554-19-3P 597554-20-6P 597554-21-7P 597554-22-8P  
 597554-23-9P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (anthrylphenylphenylfluorene derivs. for organic EL devices with high luminescence efficiency)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L30 ANSWER 14 OF 20 HCPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2003:58421 HCPLUS Full-text

DOCUMENT NUMBER: 138:128806

TITLE: Light-emitting device and aromatic compound

INVENTOR(S): Igarashi, Tatsuya; Qiu, Xuepeng

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

10/572,586-319461-EIC SEARCH

SOURCE: PCT Int. Appl., 76 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003007658	A2	20030123	WO 2002-JP6998	2002 0710
WO 2003007658	A3	20030703		<--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002317506	A1	20030129	AU 2002-317506	2002 0710
EP 1412450	A2	20040428	EP 2002-745913	2002 0710
CN 1527871	A	20040908	CN 2002-813990	2002 0710
CN 1302087	C	20070228		<--
JP 2004535051	T	20041118	JP 2003-513286	2002 0710
TW 575540	B	20040211	TW 2002-91115468	2002 0711
KR 902524	B1	20090615	KR 2004-700398	2004 0109
US 20040232409	A1	20041125	US 2004-483391	2004 0629
US 7517592	B2	20090414		<--
JP 2007306009	A	20071122	JP 2007-142283	2007 0529
US 20080152948	A1	20080626	US 2008-34833	2008 0221

10/572,586-319461-EIC SEARCH

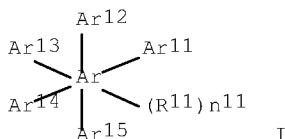
US 20080233430	A1	20080925	US 2008-34823	
				<-- 2008 0221
PRIORITY APPLN. INFO.:				<-- JP 2001-211269 A 2001 0711
				<-- JP 2001-329676 A 2001 1026
				<-- JP 2003-513286 A3 2002 0710
				<-- WO 2002-JP6998 W 2002 0710
				<-- US 2004-483391 A3 2004 0629

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 138:128806

ED Entered STN: 24 Jan 2003

GI



AB Light-emitting devices comprising a pair of electrodes and a light-emitting layer or a plurality of organic layers comprising a light-emitting layer disposed between them are described in which the light-emitting layer or  $\geq 1$  of the organic layers comprising the light-emitting layer comprises  $\geq 1$  compound represented by the general formula I (Ar11, Ar12, Ar13, Ar14 and Ar15 = independently selected aryl or heteroaryl groups; Ar = a benzene ring, a naphthalene ring, a phenanthrene ring or an anthracene ring;  $\geq 1$  of Ar, Ar11, Ar12, Ar13, Ar14 and Ar15 is a condensed aryl group, a condensed or uncondensed heteroaryl group or a group comprising a condensed aryl group or a condensed or uncondensed heteroaryl group; Ar11, Ar12, Ar13, Ar14 and Ar15 are not bonded to each other to form a ring; R11 = a substituent; and n11 = an integer  $\geq 0$ ). Selected aromatic compds. corresponding to I are claimed.

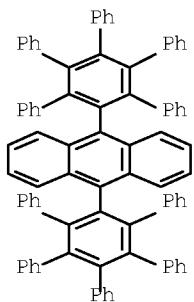
IT 489429-57-4P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(light-emitting devices using aromatic compds. and aromatic compds.)

RN 489429-57-4 HCPLUS

CN Anthracene, 9,10-bis(4',5',6'-triphenyl[1,1':2',1''-terphenyl]-3'-yl)- (9CI) (CA INDEX NAME)



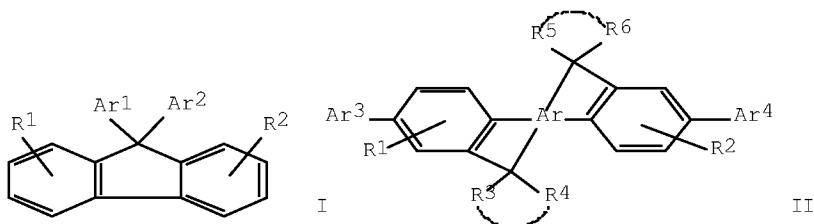
IC ICM H05B  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 Section cross-reference(s): 25  
 IT 489429-55-2P 489429-56-3P 489429-57-4P  
 489429-58-5P 489429-59-6P  
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (light-emitting devices using aromatic compds. and aromatic compds.)  
 OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE  
 THIS RECORD (18 CITINGS)  
 REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L30 ANSWER 15 OF 20 HCAPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2002:716895 HCAPLUS Full-text  
 DOCUMENT NUMBER: 137:255075  
 TITLE: Electroluminescent (EL) devices  
 INVENTOR(S): Hu, Nan-Xing; Aziz, Hany; Jain, Poonam;  
 Popovic, Zoran D.  
 PATENT ASSIGNEE(S): Xerox Corporation, USA  
 SOURCE: U.S. Pat. Appl. Publ., 46 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20020132134	A1	20020919	US 2001-771311	2001 0126
US 6479172	B2	20021112		<--
US 20030044646	A1	20030306	US 2002-232558	2002 0829
US 6562485	B2	20030513		<--
PRIORITY APPLN. INFO.:			US 2001-771311	A3 2001 0126

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 OTHER SOURCE(S): MARPAT 137:255075

ED Entered STN: 20 Sep 2002  
 GI



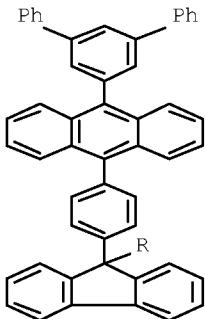
AB Electroluminescent devices are described which employ compds. are described by the general formula I and II (R1 and R2 = H, alkyl, alicyclic alkyl, alkoxy, halo, and cyano groups, and, in II, aryl groups; Ar1 and Ar2 = independently selected aromatic component or an aryl group comprised of 4-15 conjugate-bonded or fused benzene rings; R3, R4, R5, and R6 = independently selected H, an alkyl, alicyclic alkyl, aryl, and alkoxy group; wherein R3 and R4, or R4 and R5 are optionally combined into a bivalent hydrocarbon group selected from the group consisting of an alkylene, an alkylidene, an alicyclic alkylidene, and an arylalkylidene; Ar3 and Ar4 = independently selected aryl groups; and Ar = a tetravalent aromatic group). The compds. and their mixts. are also described.

IT 460347-65-3 460347-66-4  
460347-67-5  
RL: DEV (Device component use); USES (Uses)  
(electroluminescent devices employing fluorene derivs. and aryl derivs.)

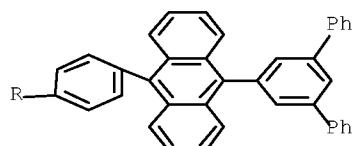
RN 460347-65-3 HCPLUS

CN Anthracene, 9,9'-(9H-fluoren-9-ylidenedi-4,1-phenylene)bis[10-[1,1':3',1'''-terphenyl]-5'-yl- (9CI) (CA INDEX NAME)

PAGE 1-A



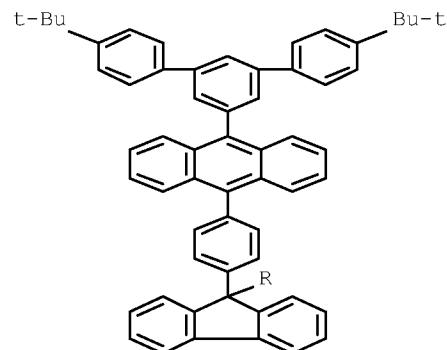
PAGE 2-A



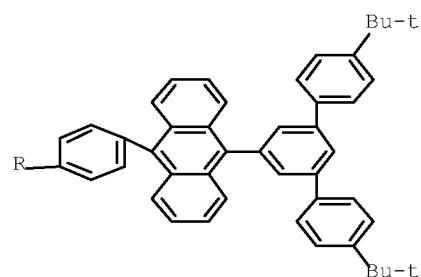
RN 460347-66-4 HCAPLUS

CN Anthracene, 9,9'-(9H-fluoren-9-ylidenedi-4,1-phenylene)bis[10-[4,4''-bis(1,1-dimethylethyl)[1,1':3',1'''-terphenyl]-5'-yl]- (9CI)  
(CA INDEX NAME)

PAGE 1-A



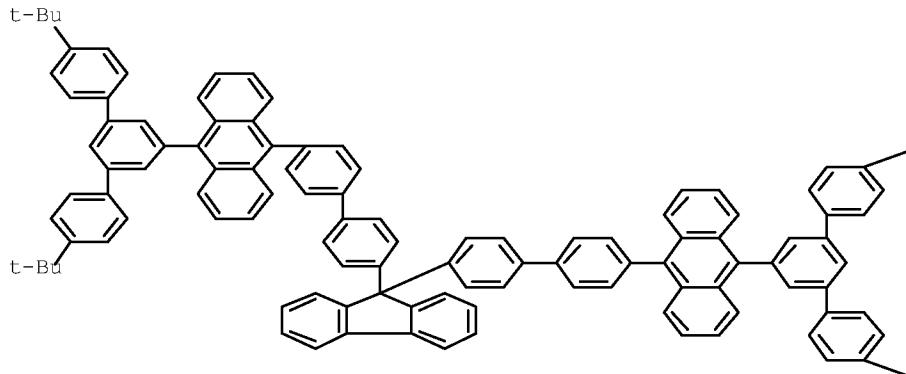
PAGE 2-A



RN 460347-67-5 HCAPLUS

CN Anthracene, 9,9'-(9H-fluoren-9-ylidenebis([1,1'-biphenyl]-4',4-diyl))bis[10-[4,4''-bis(1,1-dimethylethyl)[1,1':3',1'''-terphenyl]-5'-yl]- (9CI)  
(CA INDEX NAME)

PAGE 1-A



PAGE 1-B

— Bu-t— Bu-t

IC ICM H05B033-14

INCL 428690000

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 25, 76

IT 12798-95-7 31274-51-8 37271-44-6 50926-11-9, Indium tin oxide 123847-85-8 266349-83-1 266349-84-2 266349-85-3  
 266349-86-4 460347-60-8 460347-62-0 460347-65-3  
 460347-66-4 460347-67-5 460347-68-6  
 460347-69-7 460347-70-0 460347-71-1 460347-72-2  
 460347-73-3 460347-74-4 460347-75-5 460347-76-6  
 460347-77-7 460347-78-8 460347-79-9 460347-80-2  
 460347-81-3 460347-82-4 460347-83-5 460347-84-6  
 460347-85-7 460347-86-8 460347-87-9 460347-88-0  
 460347-89-1 460347-90-4 460347-91-5 460347-92-6  
 460347-99-3 460348-13-4 460348-19-0

RL: DEV (Device component use); USES (Uses)  
 (electroluminescent devices employing fluorene derivs. and aryl derivs.)

OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE  
 THIS RECORD (10 CITINGS)

10/572,586-319461-EIC SEARCH

ACCESSION NUMBER: 2001:730670 HCAPLUS Full-text  
 DOCUMENT NUMBER: 135:280171  
 TITLE: Anthracene derivatives and organic  
 electroluminescent devices made by using the  
 same  
 INVENTOR(S): Hosokawa, Chishio; Ikeda, Hidetsugu;  
 Funahashi, Masakazu  
 PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 71 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2001072673	A1	20011004	WO 2001-JP2330	2001 0323
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W: CN, IN, JP, KR RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1182183	A1	20020227	EP 2001-915727	2001 0323
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EP 1182183	B1	20091209		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
CN 1226250	C	20051109	CN 2001-800733	2001 0323
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CN 1754877	A	20060405	CN 2005-10106888	2001 0323
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AT 451344	T	20091215	AT 2001-915727	2001 0323
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US 20020048687	A1	20020425	US 2001-818846	2001 0328
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TW 574342	B	20040201	TW 2001-90107379	2001 0328
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KR 843819	B1	20080703	KR 2001-714307	2001 1109
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IN 2001CN01650	A	20070907	IN 2001-CN1650	2001 1126
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US 20040100188	A1	20040527	US 2003-610930	2003 0702
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US 6797848	B2	20040928	JP 2000-90644	A 2000

PRIORITY APPLN. INFO.:

0329

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 JP 2000-319297 A  
 2000  
 1019

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 CN 2001-800733 A3  
 2001  
 0323

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 WO 2001-JP2330 W  
 2001  
 0323

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 US 2001-818846 B1  
 2001  
 0328

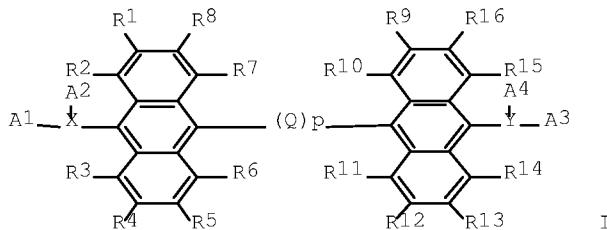
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ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 135:280171

ED Entered STN: 07 Oct 2001

GI



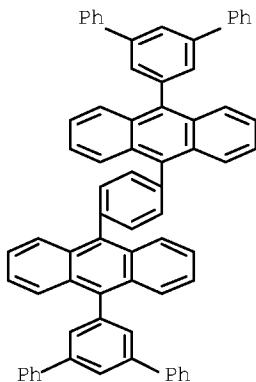
AB Anthracene derivs. (I); and organic electroluminescent (EL) devices each having at least an organic light-emitting layer sandwiched between a pair of electrodes and containing the derivs. [wherein X and Y are each a trivalent group derived from an aromatic ring; (1) A1 to A4 are each aryl or a monovalent heterocyclic group or (2) A1 and A3 are each H, and A2 and A4 are each styryl whose Ph moiety may be substituted and which may be substituted by C1-30 alkyl at the  $\alpha$ - or  $\beta$ -position; R1 to R16 are each H, halo, cyano, nitro, alkyl, or the like; Q is arylene or the like; and p is 0, 1, or 2]. The anthracene derivs. exhibit high light emitting efficiency and heat resistance, when used as the light-emitting constituent of organic EL devices.

IT 363609-66-9

RL: DEV (Device component use); USES (Uses)  
 (anthracene derivs. and organic electroluminescent devices made by  
 using the same)

RN 363609-66-9 HCAPLUS

CN Anthracene, 9,9'-(1,4-phenylene)bis[10-[1,1':3',1''-terphenyl]-5'-yl- (9CI) (CA INDEX NAME)



IC ICM C07C015-27  
 ICS C07C013-547; C07C013-19; C07C255-51; C07C015-60; C07C013-45;  
 C07D215-06; C07D285-12; C07D207-32; C07D241-42; C07D333-68;  
 C07D209-86; C07D213-06; C07D223-28; C07D223-26; C07D249-02;  
 C09K011-06; H05B033-14; H05B033-22  
 CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 Section cross-reference(s): 25  
 IT 120-12-7, Anthracene, uses 2085-33-8,  
 Tris(8-quinolinolato)aluminum 7429-90-5, Aluminum, uses  
 50926-11-9, ITO 65181-78-4, TPD 123847-85-8,  $\alpha$ -NPD  
 231606-50-1 363609-60-3 363609-61-4 363609-62-5  
 363609-63-6 363609-64-7 363609-65-8 363609-66-9  
 363609-67-0 363609-68-1 363609-69-2 363609-70-5  
 363609-71-6 363609-72-7  
 RL: DEV (Device component use); USES (Uses)  
 (anthracene derivs. and organic electroluminescent devices made by  
 using the same)  
 OS.CITING REF COUNT: 18 THERE ARE 18 CAPLUS RECORDS THAT CITE  
 THIS RECORD (24 CITINGS)  
 REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L30 ANSWER 17 OF 20 HCPLUS COPYRIGHT 2010 ACS on STN  
 ACCESSION NUMBER: 2000:694280 HCPLUS Full-text  
 DOCUMENT NUMBER: 133:259476  
 TITLE: Amino or styryl compound, organic thin film,  
 and electroluminescent device  
 INVENTOR(S): Hosokawa, Chishio; Funahashi, Masakazu; Azuma,  
 Hisahiro; Ikeda, Shuji; Arai, Hiromasa  
 PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 30 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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-----				
JP 2000273056	A	20001003	JP 1999-352216	1999
				1210
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PRIORITY APPLN. INFO.:			JP 1999-10660	A
				1999

&lt;--

OTHER SOURCE (S): MARPAT 133:259476

ED Entered STN: 03 Oct 2000

AB The compound comprises D1Ar1X1(X2)n (I; Ar1 = C6-30 di- or trivalent aromatic group; X1, X2 = styryl, styrylaryl, diarylamino, diarylaminoaryl; n = 0, 1; if X1 or X2 = the styryl group, then D1 = C16-60 aromatic group having  $\geq 4$  carbon rings; if X1 and X2 = the amino group, then D1 = C20-60 aromatic group having  $\geq 5$  carbon rings). I shows good heat resistance (glass transition temperature  $\geq 90^\circ$ ) and long luminescence lifetime.

IT 294881-41-7 294881-42-8

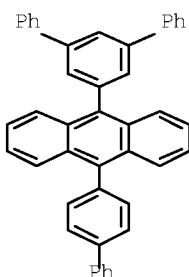
RL: PRP (Properties); TEM (Technical or engineered material use);

USES (Uses)

(amino or styryl compound for heat-resistant organic thin film or electroluminescent device)

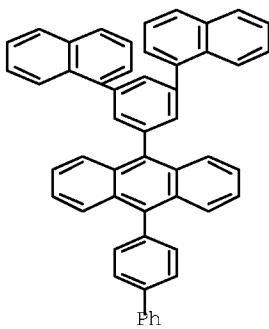
RN 294881-41-7 HCPLUS

CN Anthracene, 9-[1,1'-biphenyl]-4-yl-10-[1,1':3',1''-terphenyl]-5'-yl- (9CI) (CA INDEX NAME)



RN 294881-42-8 HCPLUS

CN Anthracene, 9-[1,1'-biphenyl]-4-yl-10-(3,5-di-1-naphthalenylphenyl)- (CA INDEX NAME)



IC ICM C07C015-60

ICS C07C211-54; C07C211-57; C07D209-86; C07D223-24; C09K011-06; H05B033-14; H05B033-22

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 25, 73

IT 279672-13-8 294881-28-0 294881-29-1 294881-30-4  
294881-31-5 294881-32-6 294881-33-7 294881-34-8  
294881-35-9 294881-36-0 294881-37-1 294881-38-2  
294881-39-3 294881-40-6 294881-41-7

10/572,586-319461-EIC SEARCH

294881-42-8 294881-43-9 294881-44-0D, fluorene derivs.

294881-45-1

RL: PRP (Properties); TEM (Technical or engineered material use);

USES (Uses)

(amino or styryl compound for heat-resistant organic thin film or  
electroluminescent device)

OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE  
THIS RECORD (7 CITINGS)

L30 ANSWER 18 OF 20 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2000:496137 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 133:252816

TITLE: Synthesis and characterization of soluble,  
photoluminescent polyamides, polyesters and  
polyethers containing  
9,10-di(4-biphenyl)anthracene segments in  
the main chain

AUTHOR(S): Mikroyannidis, J. A.

CORPORATE SOURCE: Chemical Technology Laboratory, Department of  
Chemistry, University of Patras, Patras,  
GR-26500, Greece

SOURCE: Polymer (2000), 41(23), 8193-8204

CODEN: POLMAG; ISSN: 0032-3861

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 23 Jul 2000

AB New rigid polyamides and polyesters as well as semiflexible polyethers containing substituted 9,10-di(4-biphenyl)anthracene segments in the main chain were synthesized through pyrylium salts. They were characterized by viscosimetry, FT-IR, NMR, X-ray, DSC, thermomech. anal., UV-visible, and luminescence spectroscopy. All polymers were practically amorphous and showed an enhanced solubility. The polyamides with a very high hydrophilicity dissolved in polar aprotic solvents, strong acids and pyridine. The polyesters and polyethers were soluble in all tested solvents and even in chloroform and THF. The polyamides had higher Tgs (165-220°C) than the polyesters (100-106°C) and polyethers (98-105°C). The polymers having biphenyl pendent groups showed lower Tgs and higher thermal stability than their counterparts with Ph pendent groups. All the polymers displayed violet to blue photoluminescence in solution and in the solid state with maxima at 366-422 and 435-463 nm, resp. The polymers carrying biphenyl pendent groups exhibited in solution more broad emission spectra and higher quantum yields than the corresponding polymers with Ph pendent groups.

IT 294882-40-9P 294882-41-0P

294882-42-1P 294882-43-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP

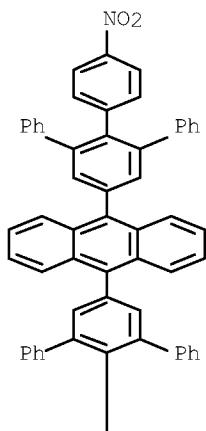
(Preparation); RACT (Reactant or reagent)

(monomer intermediate; preparation of photoluminescent polymers  
containing dibiphenylanthracene units)

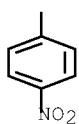
RN 294882-40-9 HCAPLUS

CN Anthracene, 9,10-bis(4-nitro-6'-phenyl[1,1':2',1''-terphenyl]-4'-yl)- (9CI) (CA INDEX NAME)

PAGE 1-A

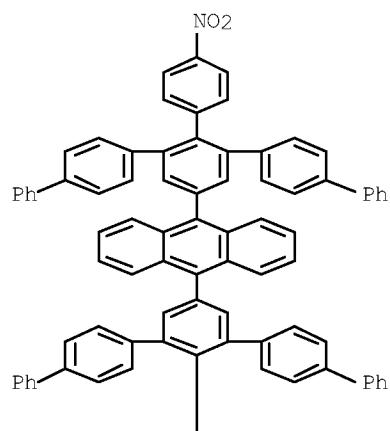


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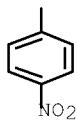


RN 294882-41-0 HCAPLUS  
 CN Anthracene, 9,10-bis[2'-(4-nitrophenyl)][1,1':4',1'':3'',1'''':4''',1''''-quinquephenyl]-5''-yl]-(9CI) (CA INDEX NAME)

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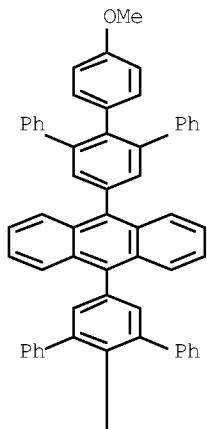
PAGE 2-A



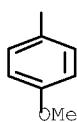
RN 294882-42-1 HCAPLUS

CN Anthracene, 9,10-bis(4-methoxy-6'-phenyl[1,1':2',1''-terphenyl]-4'-yl)- (9CI) (CA INDEX NAME)

PAGE 1-A



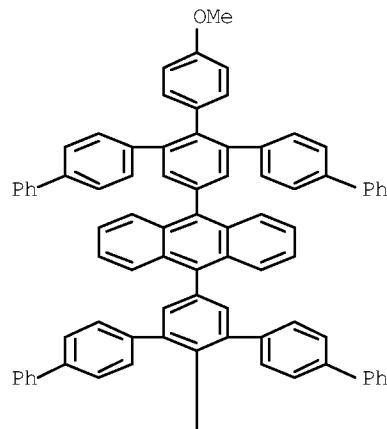
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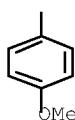
RN 294882-43-2 HCAPLUS

CN Anthracene, 9,10-bis[2''-(4-methoxyphenyl)[1,1':4',1''':3'',1''':4''',1''''-quinquephenyl]-5''-yl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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IT 294882-44-3P 294882-45-4P

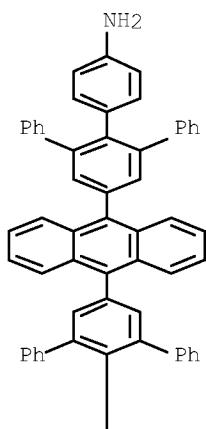
294882-46-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (monomer; preparation of photoluminescent polymers containing dibiphenylanthracene units)

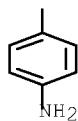
RN 294882-44-3 HCAPLUS

CN [1,1':2',1''-Terphenyl]-4-amine,  
 4',4''''-(9,10-anthracenediyl)bis[6'-phenyl- (9CI) (CA INDEX  
 NAME)

PAGE 1-A

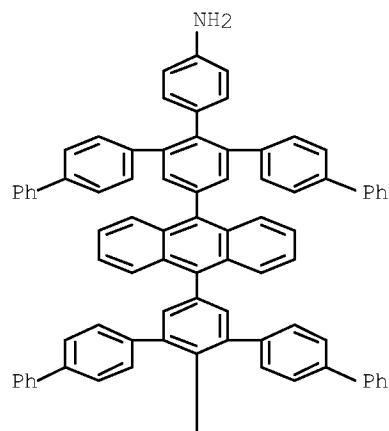


PAGE 2-A

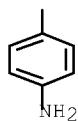


RN 294882-45-4 HCAPLUS  
 CN [1,1':2',1'':4'',1''':-Quaterphenyl]-4-amine,  
 4',4''':-(9,10-anthracenediyl)bis[6'-[1,1'-biphenyl]-4-yl- (9CI)  
 (CA INDEX NAME)

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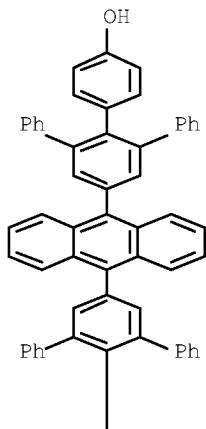


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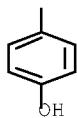


RN 294882-46-5 HCAPLUS  
 CN [1,1':2',1'':-Terphenyl]-4-ol,  
 4',4''':-(9,10-anthracenediyl)bis[6'-phenyl- (9CI) (CA INDEX  
 NAME)

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IT 294882-47-6P 294882-48-7P  
 294882-50-1P 294882-52-3P  
 294882-54-5P 294882-55-6P  
 294882-56-7P 294882-57-8P  
 294882-59-0P 294882-60-3P  
 294882-61-4P 294882-62-5P  
 294882-64-7P

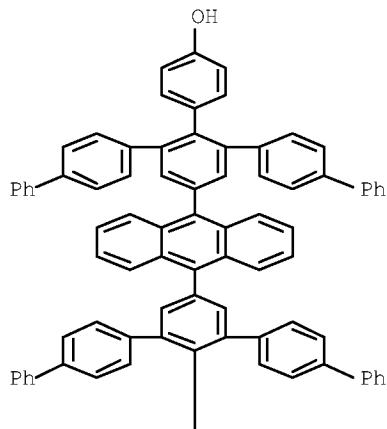
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(preparation of photoluminescent polymers containing dibiphenylanthracene units)

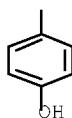
RN 294882-47-6 HCPLUS

CN [1,1':2',1'':4'',1'''-Quaterphenyl]-4-ol,  
 4',4''''-(9,10-anthracenediyl)bis[6'-[1,1'-biphenyl]-4-yl- (9CI)  
 (CA INDEX NAME)

PAGE 1-A



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RN 294882-48-7 HCPLUS

CN Poly[iminocarbonyl-1,4-phenylenecarbonylimino(6'-phenyl[1,1':2',1'''-terphenyl]-4',4'-diyl)-9,10-anthracenediyl(6'-phenyl[1,1':2',1'''-terphenyl]-4',4'-diyl)] (9CI) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
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\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
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RN 294882-50-1 HCPLUS

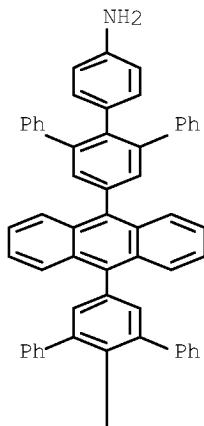
CN 1,4-Benzenedicarbonyl dichloride, polymer with  
 4',4'''-(9,10-anthracenediyl)bis[6'-phenyl[1,1':2',1'''-terphenyl]-4-amine] (9CI) (CA INDEX NAME)

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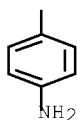
CRN 294882-44-3

CMF C62 H44 N2

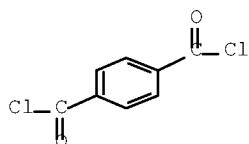
PAGE 1-A



PAGE 2-A



CM 2

CRN 100-20-9  
CMF C8 H4 Cl2 O2

RN 294882-52-3 HCPLUS  
 CN Poly[iminocarbonyl-1,4-phenylenecarbonylimino[6'-[1,1'-biphenyl]-4-yl[1,1':2',1'':4'',1''':-quaterphenyl]-4,4'-diyl]-9,10-anthracenediyl[6'-[1,1'-biphenyl]-4-yl[1,1':2',1'':4'',1''':-quaterphenyl]-4',4-diyl]] (9CI) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
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\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
 \*

RN 294882-54-5 HCAPLUS

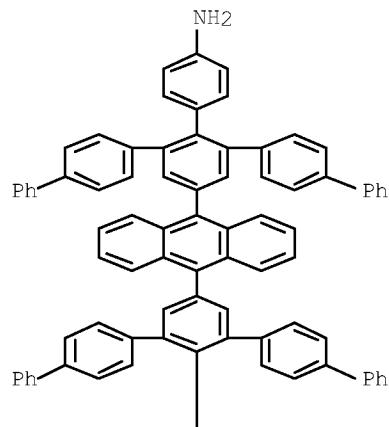
CN 1,4-Benzenedicarbonyl dichloride, polymer with  
4',4''''-(9,10-anthracenediyl)bis[6'-(1,1'-biphenyl)-4-  
yl[1,1':2',1'':4'',1'''-quaterphenyl]-4-amine] (9CI) (CA INDEX  
NAME)

CM 1

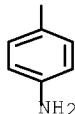
CRN 294882-45-4

CMF C86 H60 N2

PAGE 1-A



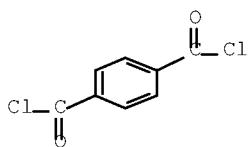
PAGE 2-A



CM 2

CRN 100-20-9

CMF C8 H4 Cl2 O2



RN 294882-55-6 HCAPLUS

CN Poly[oxycarbonyl-1,4-phenylenecarbonyloxy(6'-phenyl[1,1':2',1'':  
terphenyl]-4,4'-diyl)-9,10-anthracenediyl(6'-phenyl[1,1':2',1'':  
terphenyl]-4',4-diyl)] (9CI) (CA INDEX NAME)

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
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\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT

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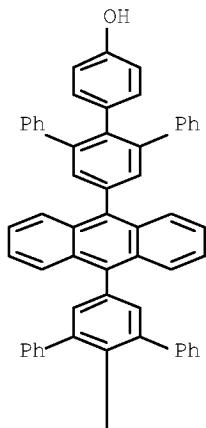
RN 294882-56-7 HCPLUS  
CN 1,4-Benzenedicarbonyl dichloride, polymer with  
4',4''''-(9,10-anthracenediyl)bis[6'-phenyl[1,1':2',1'''-terphenyl]-  
4-ol] (9CI) (CA INDEX NAME)

CM 1

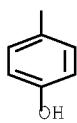
CRN 294882-46-5

CMF C62 H42 O2

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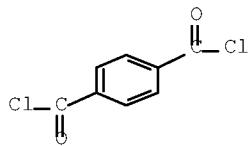
PAGE 2-A



CM 2

CRN 100-20-9

CMF C8 H4 Cl2 O2



RN 294882-57-8 HCAPLUS  
 CN Poly[oxy carbonyl-1,4-phenylene carbonyloxy[6'-(1,1'-biphenyl)-4-yl[1,1':2',1'':4'',1''':-quaterphenyl]-4,4'-diyl]-9,10-anthracenediyl[6'-(1,1'-biphenyl)-4-yl[1,1':2',1'':4'',1''':-quaterphenyl]-4',4'-diyl]] (9CI) (CA INDEX NAME)

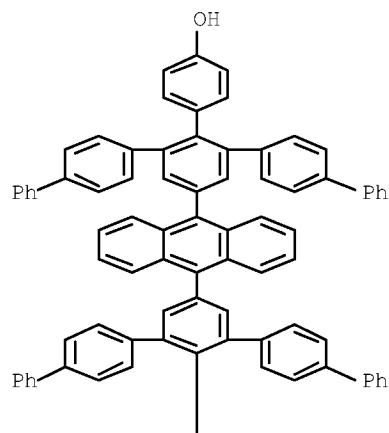
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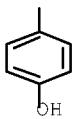
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
 \*  
 RN 294882-59-0 HCAPLUS  
 CN 1,4-Benzeneddicarbonyl dichloride, polymer with  
 4',4''''-(9,10-anthracenediyl)bis[6'-(1,1'-biphenyl)-4-yl[1,1':2',1'':4'',1''':-quaterphenyl]-4-ol] (9CI) (CA INDEX NAME)

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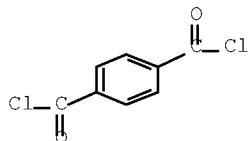
CRN 294882-47-6  
 CMF C86 H58 O2

PAGE 1-A





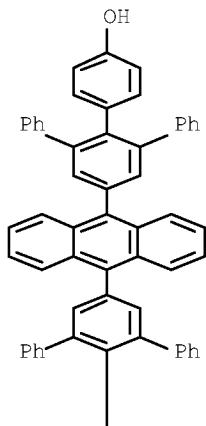
CM 2

CRN 100-20-9  
CMF C8 H4 Cl2 O2RN 294882-60-3 HCPLUS  
CN Poly[oxy-1,10-decanediyl oxy(6'-phenyl[1,1':2',1'''-terphenyl]-4,4'-diyl)-9,10-anthracenediyl(6'-phenyl[1,1':2',1'''-terphenyl]-4',4'-diyl)] (9CI) (CA INDEX NAME)\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
\*\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
\*  
RN 294882-61-4 HCPLUS  
CN [1,1':2',1'''-Terphenyl]-4-ol,  
4',4'''-(9,10-anthracenediyl)bis[6'-phenyl-, polymer with  
1,10-dibromodecane (9CI) (CA INDEX NAME)

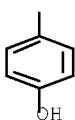
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CRN 294882-46-5  
CMF C62 H42 O2

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CM 2

CRN 4101-68-2  
 CMF C10 H20 Br2

Br—(CH<sub>2</sub>)<sub>10</sub>—Br

RN 294882-62-5 HCPLUS  
 CN Poly[oxy-1,10-decanediyl]oxy[6'-[1,1'-biphenyl]-4-yl[1,1':2',1'':4'',1''':-quaterphenyl]-4,4'-diyl]-9,10-anthracenediyl[6'-[1,1'-biphenyl]-4-yl[1,1':2',1'':4'',1''':-quaterphenyl]-4',4-diyl]] (9CI) (CA INDEX NAME)

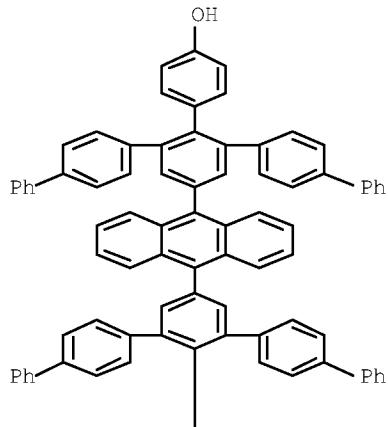
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
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\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
 \*  
 RN 294882-64-7 HCPLUS  
 CN [1,1':2',1'':4'',1''':-Quaterphenyl]-4-ol,  
 4':4''':-(9,10-anthracenediyl)bis[6'-[1,1'-biphenyl]-4-yl-],  
 polymer with 1,10-dibromodecane (9CI) (CA INDEX NAME)

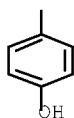
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CRN 294882-47-6  
CMF C86 H58 O2

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PAGE 2-A



CM 2

CRN 4101-68-2  
CMF C10 H20 Br2Br—(CH<sub>2</sub>)<sub>10</sub>—Br

CC 35-5 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 25, 73

IT 294882-37-4P 294882-39-6P 294882-40-9P  
 294882-41-0P 294882-42-1P  
 294882-43-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (monomer intermediate; preparation of photoluminescent polymers  
 containing dibiphenylanthracene units)

IT 294882-44-3P 294882-45-4P  
 294882-46-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)

10/572,586-319461-EIC SEARCH

(monomer; preparation of photoluminescent polymers containing dibiphenylanthracene units)

IT 294882-47-6P 294882-48-7P  
 294882-50-1P 294882-52-3P  
 294882-54-5P 294882-55-6P  
 294882-56-7P 294882-57-8P  
 294882-59-0P 294882-60-3P  
 294882-61-4P 294882-62-5P  
 294882-64-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation of photoluminescent polymers containing dibiphenylanthracene units)

OS.CITING REF COUNT: 16 THERE ARE 16 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)  
 REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 19 OF 20 HCPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1969:461049 HCPLUS Full-text

DOCUMENT NUMBER: 71:61049

ORIGINAL REFERENCE NO.: 71:11219a,11222a

TITLE: Cyclopentadienones. XV. 1-Hydroxyalkyl substituted aromatics from cyclones, alkynols, and alkynediols

AUTHOR(S): Reid, Walter; Ritz, Michael

CORPORATE SOURCE: Univ. Frankfurt/M., Frankfurt/M., Fed. Rep. Ger.

SOURCE: Justus Liebigs Annalen der Chemie (1969), 724, 122-7

CODEN: JLACBF; ISSN: 0075-4617

DOCUMENT TYPE: Journal

LANGUAGE: German

ED Entered STN: 12 May 1984

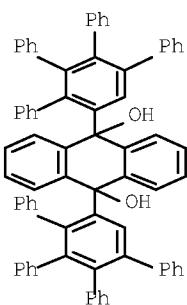
AB Cyclopentadienones reacted with alkynols and alkynediols to give (1-hydroxyalkyl) and o-bis(1-hydroxyalkyl) derivs. of C<sub>6</sub>H<sub>6</sub>. 9,10-Diethynyl-9,10-dihydro-9,10-anthracenediol reacted with tetracyclone to give 9-ethynyl-9,10-dihydro-10-(2,3,4,5-tetraphenylphenyl)-9,10-anthracenediol which upon further reaction with tetracyclone gave 9,10-bis(2,3,4,5-tetraphenylphenyl-9,10-dihydro)-9,10-anthracenediol.

IT 23421-47-8P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

RN 23421-47-8 HCPLUS

CN 9,10-Anthracenediol, 9,10-bis(2',6'-diphenyl-m-terphenyl-4'-yl)-9,10-dihydro- (8CI) (CA INDEX NAME)



CC 26 (Condensed Aromatic Compounds)

IT 23347-04-8P 23347-05-9P 23347-06-0P 23347-07-1P

23347-08-2P	23347-09-3P	23347-10-6P	23347-11-7P
23353-84-6P	23353-85-7P	23353-86-8P	23353-87-9P
23353-88-0P	<b>23421-47-8P</b>	23421-48-9P	23421-49-0P
23421-50-3P	23421-51-4P	23421-52-5P	23421-53-6P
23421-54-7P	23422-08-4P	23422-09-5P	23422-10-8P
23532-19-6P	23532-20-9P	23532-21-0P	23532-22-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

L30 ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1960:128729 HCAPLUS Full-text

DOCUMENT NUMBER: 54:128729

ORIGINAL REFERENCE NO.: 54:24600h-i,24601a-d

TITLE: Diene syntheses with diynes

AUTHOR(S): Ried, Walter; Bonnighausen, Karl Heinz

CORPORATE SOURCE: Univ. Frankfurt, Germany

SOURCE: Chemische Berichte (1960), 93, 1769-73

CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ED Entered STN: 22 Apr 2001

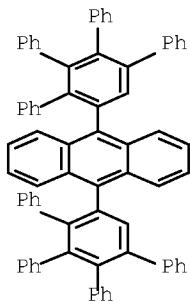
AB Polysubstituted derivs. of tolan, terphenyl, and quinquephenyl were prepared in good yields by diene syntheses. The appropriate cyclopentadienone (I) and the diyne derivative (equivalent amts.) heated to a gentle gas evolution during 20-30 min., cooled, boiled with Ac<sub>2</sub>O, and filtered gave the desired adduct; method A. I (2 moles) and 1 mole diethynyl derivative in  $\beta$ -decalol (about 3-4 cc./g. I) heated slowly to boiling, diluted with EtOAc, EtOH, or C<sub>6</sub>H<sub>6</sub>, and filtered gave the adduct; method B. The appropriate I (2 moles) suspended in  $\beta$ -decalol (about 3-4 cc./g. I), heated to gentle boiling, treated during 0.5 hr. with 1 mole diethynyl derivative in portions, the mixture refluxed 20 min., and worked up in the usual manner gave the adduct; method C. By these methods were prepared the following compds. (m.p., color, % yield, starting materials, and method given): 2,3,6-triphenyl-4,5-biphenylenetolan (II), 270-1° (HCO-NMe<sub>2</sub>, PhNO<sub>2</sub>, C<sub>5</sub>H<sub>5</sub>N), colorless, 60, (PhC.tpbond.C)2 (III), 2,5-diphenyl-3,4-biphenylenecyclopentadienone (IV), A; 2-methyl-3,4,5,6-tetraphenyltolan (V), 291-2° (C<sub>5</sub>H<sub>5</sub>N, PhMe), colorless, 42.8, III, 2-methyl-3,4,5-triphenylcyclopentadienone, A; 2',3',6',2'',3'',6''-hexaphenylquinquephenyl, 408-9° (AcPh, PhNO<sub>2</sub>), colorless, 94, tetraphenylcyclopentadienone (VI), p-C<sub>6</sub>H<sub>4</sub>(C.tpbond.CH)2 (VII), B; 2,5,3'',6''-tetraphenyl-3,4,4'',5''-bis(biphenylene)terphenyl, 408-10° (PhNO<sub>2</sub>), colorless, 75.5, IV, VII, B; 3',6'''-dimethyl-2',6',3'',5'''-tetraphenylquinquephenyl, 310-12° (PhNO<sub>2</sub>), pale yellow, 62, V, VII, B; 2',3',6',3'',5'',6'''-hexaphenyl-3',6''-benzoquinquephenyl, 366-8° (PhNO<sub>2</sub>), colorless, 65, VI, 1,4-C<sub>10</sub>H<sub>6</sub>(C.tpbond.CH)2, III; 2',3',6',3'',5'',6'''-hexaphenyl-2',3'',5'',6'''-dibenzoquenquephenyl, 399-401° (PhNO<sub>2</sub>), brownish yellow (blue-violet fluorescence in PhMe, PhOMe, dioxane, and EtOAc), 49.8, VI, 9,10-diethynylanthracene, III, C; 2',3',5',6',2'',3'',5'',6'''-octaphenylquinquephenyl (VII), 462-3° (PhNO<sub>2</sub>), colorless, 69.4, VI, p-C<sub>6</sub>H<sub>4</sub>(C.tpbond.CPh)2, A; 2'',3'',5'',6'''-tetra-Cl derivative of VII, above 470° with sintering from 450° (p-MeC<sub>6</sub>H<sub>4</sub>Br), light brown, 18, VI, 2,3,5,6-C<sub>16</sub>C<sub>6</sub>(C.tpbond.CPh)2, B; 6-(2,3,6-triphenyl-p-biphenyl-1)-2',3',5'-triphenyl-3,4-dimethylterphenyl, 378-9° (PhOMe, C<sub>5</sub>H<sub>5</sub>N), colorless, 97.8, VI, 1,2,4,5-(HC.tpbond.C)2C<sub>6</sub>H<sub>2</sub>Me<sub>2</sub>, B; 6-(2,3,6-triphenyl-p-biphenyl-1)-2',3',5'-triphenyl-2,3;4,5-dibenzoterphenyl, 295-6° (resolidifying and rem. 319-20°) (PhMe), colorless, 97.8, VI, 9,10-diethynylphenanthrene, B; 3-(2,3,6-triphenyl-p-biphenyl-1)-4-hydroxy-3',5',6'-triphenylterphenyl (VIII), 393-6° (PhNO<sub>2</sub>), pale orange, 44.3, VI, 2,4-(HC.tpbond.C)2C<sub>6</sub>H<sub>3</sub>OH, B. The infrared absorption spectra of II, VII, VIII were recorded.

IT **103511-51-9P**, Anthracene, 9,10-bis(2,3,4,5-tetraphenylphenyl)-

RL: PREP (Preparation)  
(preparation of)

RN 103511-51-9 HCAPLUS

CN Anthracene, 9,10-bis(5,6-diphenyl[1,1':2',1'''-terphenyl]-3'-yl)-  
(9CI) (CA INDEX NAME)



CC 10F (Organic Chemistry: Condensed Carbocyclic Compounds)  
 IT 3364-01-0P, p-Quinquephenyl,  
 2',2''',3',3''',5',5''',6',6'''-octaphenyl- 103511-40-6P,  
 Naphthalene, 1,4-bis(2,3,4,5-tetraphenylphenyl)-  
 303511-51-9P, Anthracene,  
 9,10-bis(2,3,4,5-tetraphenylphenyl)- 103511-52-0P, Phenanthrene,  
 9,10-bis(2,3,4,5-tetraphenylphenyl)- 103650-90-4P, Phenol,  
 2,4-bis(2,3,4,5-tetraphenylphenyl)- 108750-92-1P,  
 p-Quinquephenyl, 2''',3'-dimethyl-2',3''',5''',6'-tetraphenyl-  
 108760-18-5P, p-Quinquephenyl,  
 2'',3'',5'',6''-tetrachloro-2',2''',3',3''',5',5''',6',6'''-  
 octaphenyl- 108800-39-1P,  
 1,1':4',1'':2'',1''':2''',1''''-Quinquephenyl,  
 4'',5''-dimethyl-2',3',3''',4''',5''',6'-hexaphenyl-  
 108800-45-9P, p-Quinquephenyl, 2',2''',3',3''',5''',6'-hexaphenyl-  
 119597-23-8P, Acetylene, phenyl(3,4,5,6-tetraphenyl-o-tolyl)-  
 120830-70-8P, Benzene, p-bis(1,4-diphenyl-2-triphenylenyl)-  
 121973-79-3P, Triphenylene, 1,2,4-triphenyl-3-phenylethynyl-  
 RL: PREP (Preparation)  
 (preparation of)  
 OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE  
 THIS RECORD (5 CITINGS)

FULL SEARCH HISTORY

=> d his nofile

(FILE 'HOME' ENTERED AT 13:35:18 ON 13 JAN 2010)

FILE 'HCAPLUS' ENTERED AT 13:36:00 ON 13 JAN 2010  
E US20070055085/PN

L1 1 SEA SPE=ON ABB=ON PLU=ON US20070055085/PN  
D ALL  
SEL RN

FILE 'REGISTRY' ENTERED AT 13:37:20 ON 13 JAN 2010  
L2 46 SEA SPE=ON ABB=ON PLU=ON (13922-41-3/BI OR 154853-83  
-5/BI OR 164724-35-0/BI OR 18937-92-3/BI OR 204530-94-9  
/BI OR 2052-07-5/BI OR 2085-33-8/BI OR 209980-53-0/BI  
OR 22082-97-9/BI OR 3282-24-4/BI OR 377737-89-8/BI OR  
400607-48-9/BI OR 667940-23-0/BI OR 669016-16-4/BI OR  
853945-27-4/BI OR 853945-28-5/BI OR 853945-29-6/BI OR  
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853945-54-7/BI OR 853945-55-8/BI OR 853945-56-9/BI OR  
853945-57-0/BI OR 853945-58-1/BI)  
D SCA

FILE 'STNGUIDE' ENTERED AT 13:37:45 ON 13 JAN 2010

FILE 'LREGISTRY' ENTERED AT 13:40:19 ON 13 JAN 2010  
L3 STR

FILE 'REGISTRY' ENTERED AT 13:51:16 ON 13 JAN 2010  
L4 3 SEA SSS SAM L3  
D SCA

FILE 'STNGUIDE' ENTERED AT 13:52:52 ON 13 JAN 2010

FILE 'LREGISTRY' ENTERED AT 13:55:11 ON 13 JAN 2010  
L5 STR L3

FILE 'REGISTRY' ENTERED AT 13:55:25 ON 13 JAN 2010  
L6 15 SEA SSS SAM L5  
L7 2252 SEA SSS FUL L5  
L8 21 SEA SPE=ON ABB=ON PLU=ON L2 AND L7  
L9 25 SEA SPE=ON ABB=ON PLU=ON L2 NOT L8  
D SCA

FILE 'STNGUIDE' ENTERED AT 13:57:25 ON 13 JAN 2010  
D QUE STAT

FILE 'LREGISTRY' ENTERED AT 13:58:44 ON 13 JAN 2010  
L10 D QUE L3  
STR L5

FILE 'REGISTRY' ENTERED AT 14:05:41 ON 13 JAN 2010  
L11 7 SEA SUB=L7 SSS SAM L10  
D SCA  
L12 149 SEA SUB=L7 SSS FUL L10  
SAV TEMP L7 GAR586REG/A  
SAV TEMP L12 GAR586REGA/A

10/572,586-319461-EIC SEARCH

FILE 'LREGISTRY' ENTERED AT 14:07:53 ON 13 JAN 2010  
L13 STR L10

FILE 'REGISTRY' ENTERED AT 14:10:47 ON 13 JAN 2010  
L14 49 SEA SUB=L7 SSS SAM L13  
D QUE STAT

FILE 'LREGISTRY' ENTERED AT 14:12:01 ON 13 JAN 2010  
L15 STR L13

FILE 'REGISTRY' ENTERED AT 14:12:52 ON 13 JAN 2010  
L16 7 SEA SUB=L7 SSS SAM L15  
D SCA

L17 131 SEA SUB=L7 SSS FUL L15  
SAV TEMP L17 GAR586REGB/A

L18 10 SEA SPE=ON ABB=ON PLU=ON L2 AND L12

L19 7 SEA SPE=ON ABB=ON PLU=ON L2 AND L17

FILE 'LREGISTRY' ENTERED AT 14:15:21 ON 13 JAN 2010  
L20 STR L15

FILE 'REGISTRY' ENTERED AT 14:17:34 ON 13 JAN 2010  
L21 6 SEA SUB=L7 SSS SAM L20  
D SCA

L22 61 SEA SUB=L7 SSS FUL L20  
SAV TEMP L22 GAR586REGC/A

L23 9 SEA SPE=ON ABB=ON PLU=ON L2 AND L22

L24 169 SEA SPE=ON ABB=ON PLU=ON L12 OR L17 OR L22

L25 13 SEA SPE=ON ABB=ON PLU=ON L2 AND L24  
D QUE  
D SCA

FILE 'HCAPLUS' ENTERED AT 14:21:26 ON 13 JAN 2010  
L26 65 SEA SPE=ON ABB=ON PLU=ON L24

L27 1 SEA SPE=ON ABB=ON PLU=ON L1 AND L26  
D SCA

L28 QUE SPE=ON ABB=ON PLU=ON FY=<2004 NOT P/DT

L29 QUE SPE=ON ABB=ON PLU=ON (PY=<2004 OR PRY=<2004 OR  
AY=<2004 OR MY=<2004 OR REVIEW/DT) AND P/DT

L30 20 SEA SPE=ON ABB=ON PLU=ON L26 AND (L28 OR L29)  
SAV TEMP L30 GAR586HCP/A

FILE 'STNGUIDE' ENTERED AT 14:24:03 ON 13 JAN 2010

FILE 'HCAPLUS' ENTERED AT 14:24:36 ON 13 JAN 2010  
D QUE STAT L30  
D L30 1-20 IBIB ED ABS HITSTR HITIND